

HgCdTe Infrared Avalanche Photodiode Single Photon Detector Arrays for the LIST and Other Decadal Missions

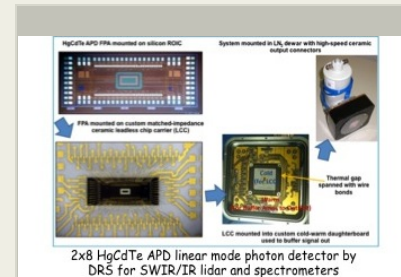
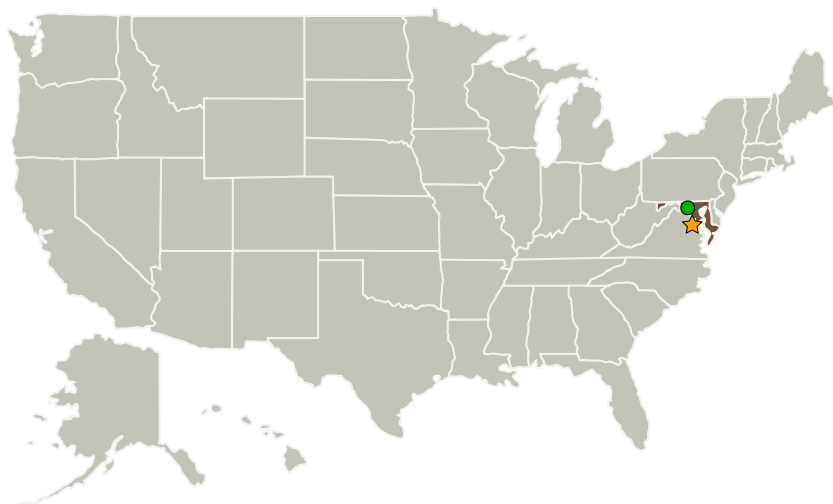
Completed Technology Project (2012 - 2015)



Project Introduction

Develop a HgCdTe avalanche photodiode (APD) SWIR/IR linear mode photon counting (LMPC) array detector system in support of the LIST lidar. Provide a new type of SWIR/IR focal plane array with near zero read-out noise and fast frame rate for IR spectrometers and cameras for other Earth science decadal missions and scientific and commercial applications.

Primary U.S. Work Locations and Key Partners



Project Image HgCdTe Infrared Avalanche Photodiode Single Photon Detector Arrays for the LIST and Other Decadal Missions

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Organizations Performing Work	Role	Type	Location
★ NASA Headquarters(HQ)	Lead Organization	NASA Center	Washington, District of Columbia
● Goddard Space Flight Center(GSFC)	Supporting Organization	NASA Center	Greenbelt, Maryland

Primary U.S. Work Locations

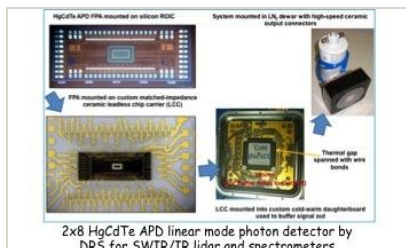
Maryland

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Images



10480-1360010117085.jpg

Project Image HgCdTe Infrared Avalanche Photodiode Single Photon Detector Arrays for the LIST and Other Decadal Missions (<https://techport.nasa.gov/image/1578>)

Organizational Responsibility

Responsible Mission Directorate:

Science Mission Directorate (SMD)

Lead Center / Facility:

NASA Headquarters (HQ)

Responsible Program:

Earth Science

Project Management

Program Director:

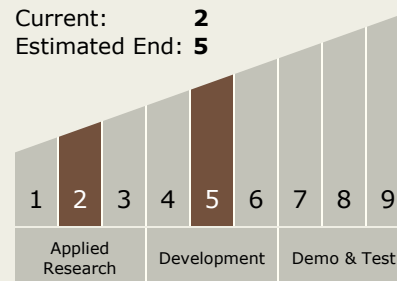
George J Komar

Principal Investigator:

Xiaoli Sun

Technology Maturity (TRL)

Start: 2
Current: 2
Estimated End: 5



Technology Areas

Primary:

Continued on following page.

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Completed Technology Project (2012 - 2015)



Technology Areas (cont.)

- TX08 Sensors and Instruments
 - └ TX08.1 Remote Sensing Instruments/Sensors
 - └ TX08.1.1 Detectors and Focal Planes

Target Destination

Earth